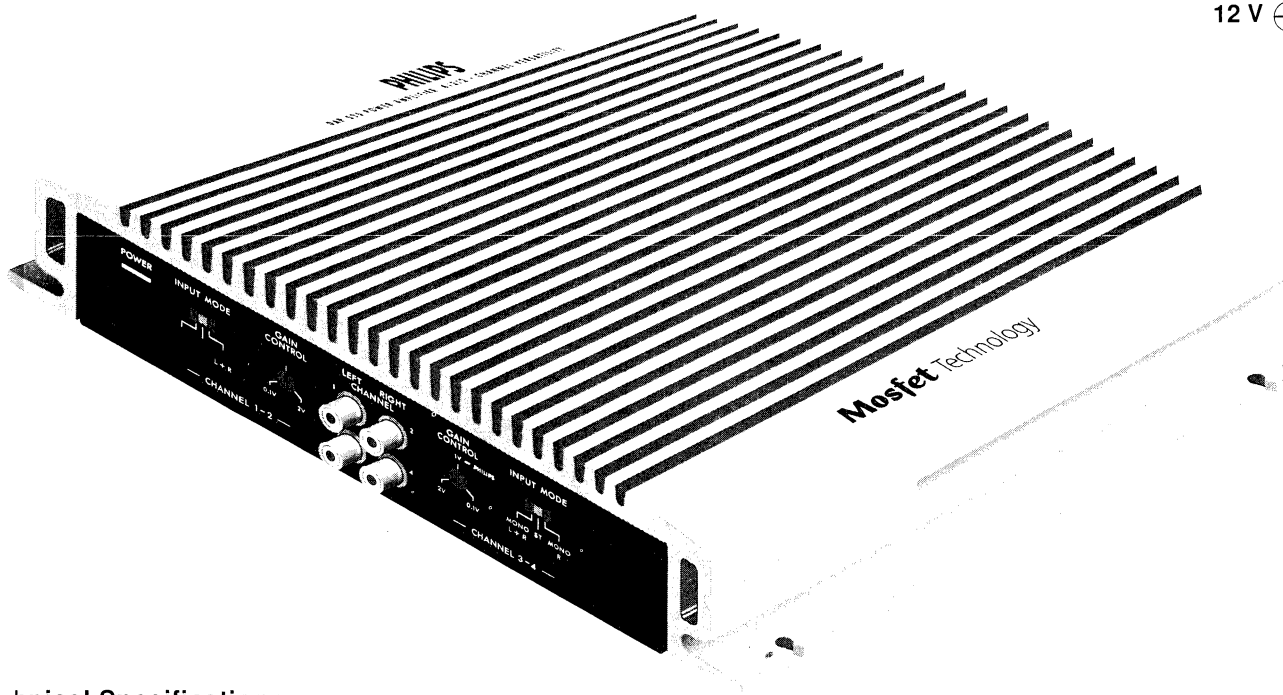
Car Stereo Amplifier 22DAP525/00

Service
Service
Service

Service Manual

12 V



Technical Specifications

Power output	4 x 25 Watt (THD=0.08%) (in bridge mode 2 x 50 W)	Channel separation	80 dB
		Signal-to-noise ratio	105 db (A-weighted)
Maximum power	4 x 50 Watt (in bridge mode 2 x 100 W)	Residual noise	0.6 mV (input shorted)
		Stand-by current	1 mA max.
Input sensitivity	0.1 - 2.0 V	Fuse size	20 A
Input impedance	10 kΩ	Weight	2.6 kg
Frequency response	5 Hz - 100 kHz (-3 dB)	Size LxWxH	259 x 250 x 53 (mm) 102 x 98.5 x 20.9 (inches)
CMR	40 dB		

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PCS 74 011

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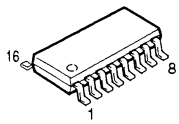
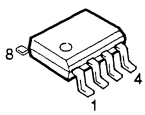
Semiconductors lead lay-out

µPC494GS



NJM4580E



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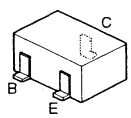
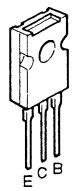
2SC1815

2SA1162, 2SC2712
RN1402, 2SC3326



2SA1358, 2SC3421
2SC3423



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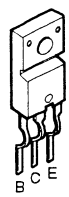

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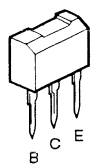

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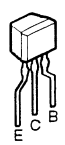

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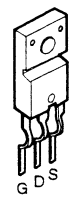
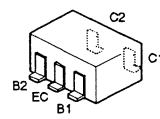


FC103, FC104



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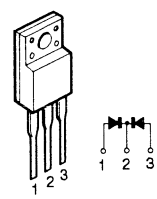

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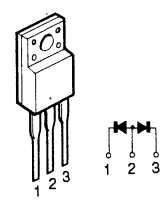
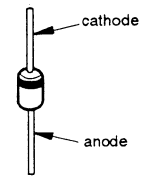
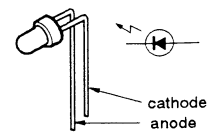


GMA01
MTZJ3.6A, MTZJ6.2A
MTZJ22A, HZS16-2L

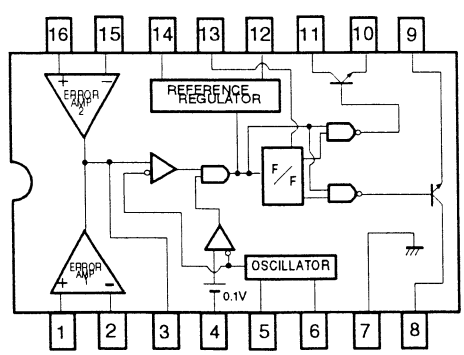


SE3410E-LF53

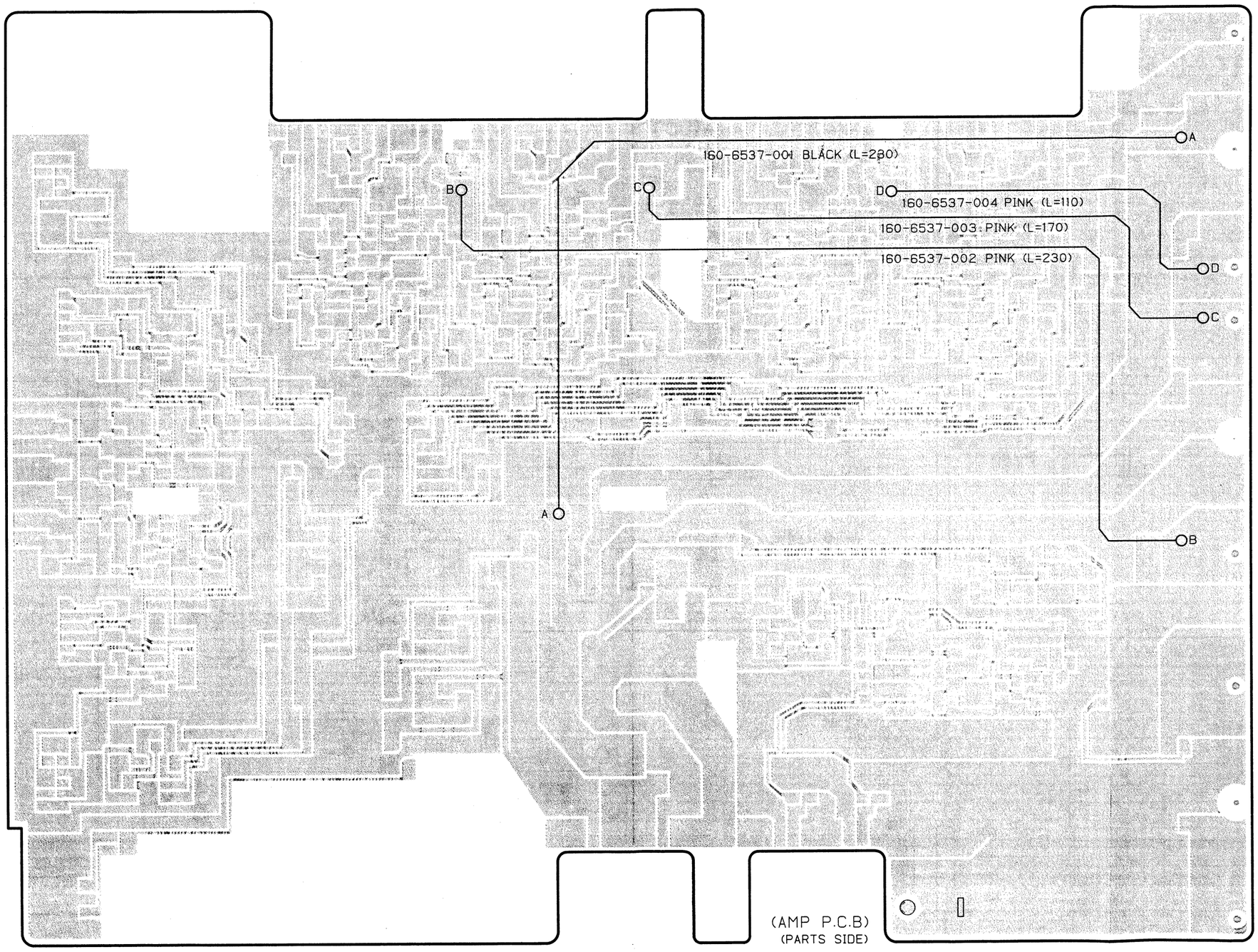


IC Block diagram

IC501 µPC494GS



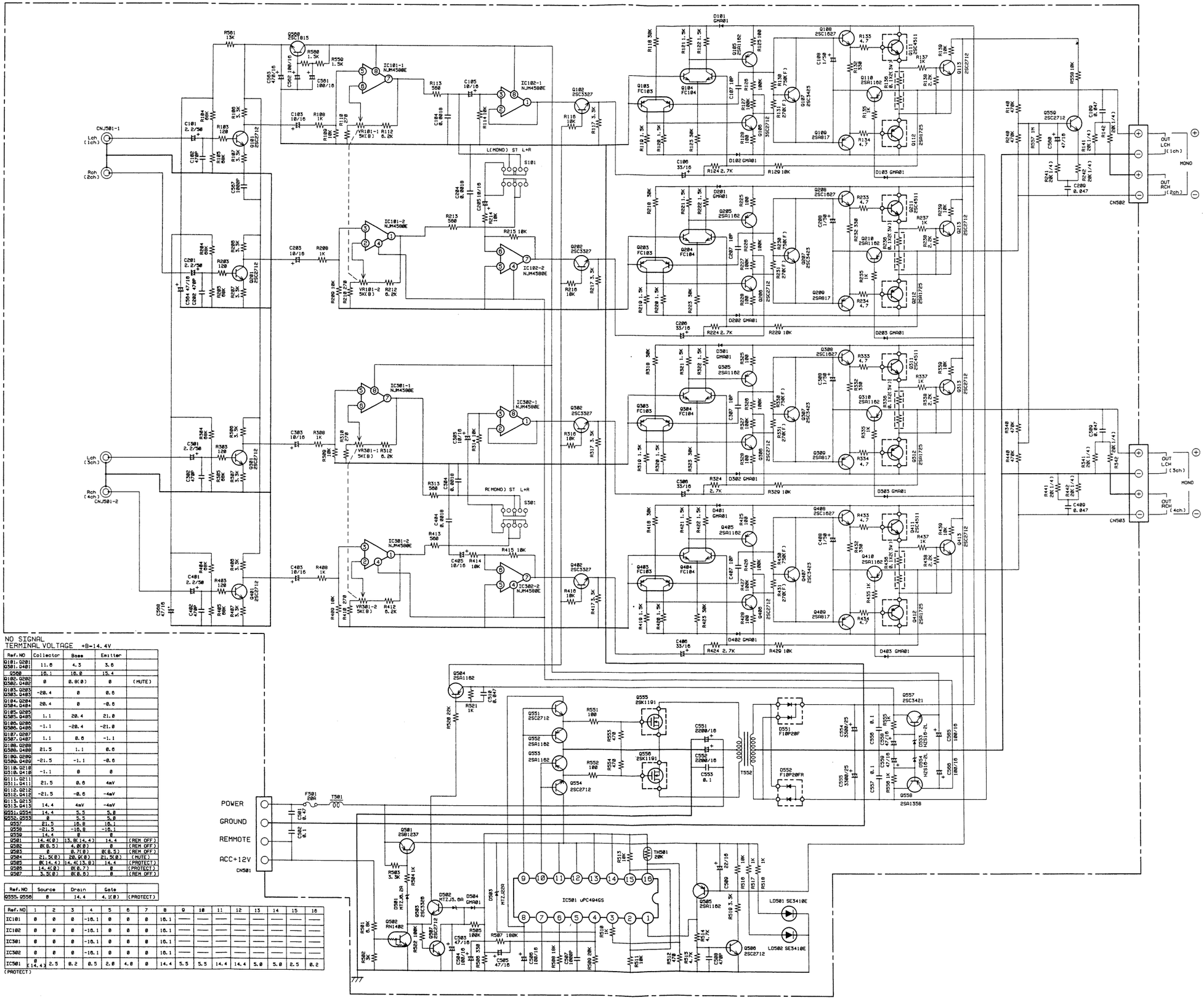
PCS 74 012



PCS 74 013

22DAP525/00

Circuit diagram



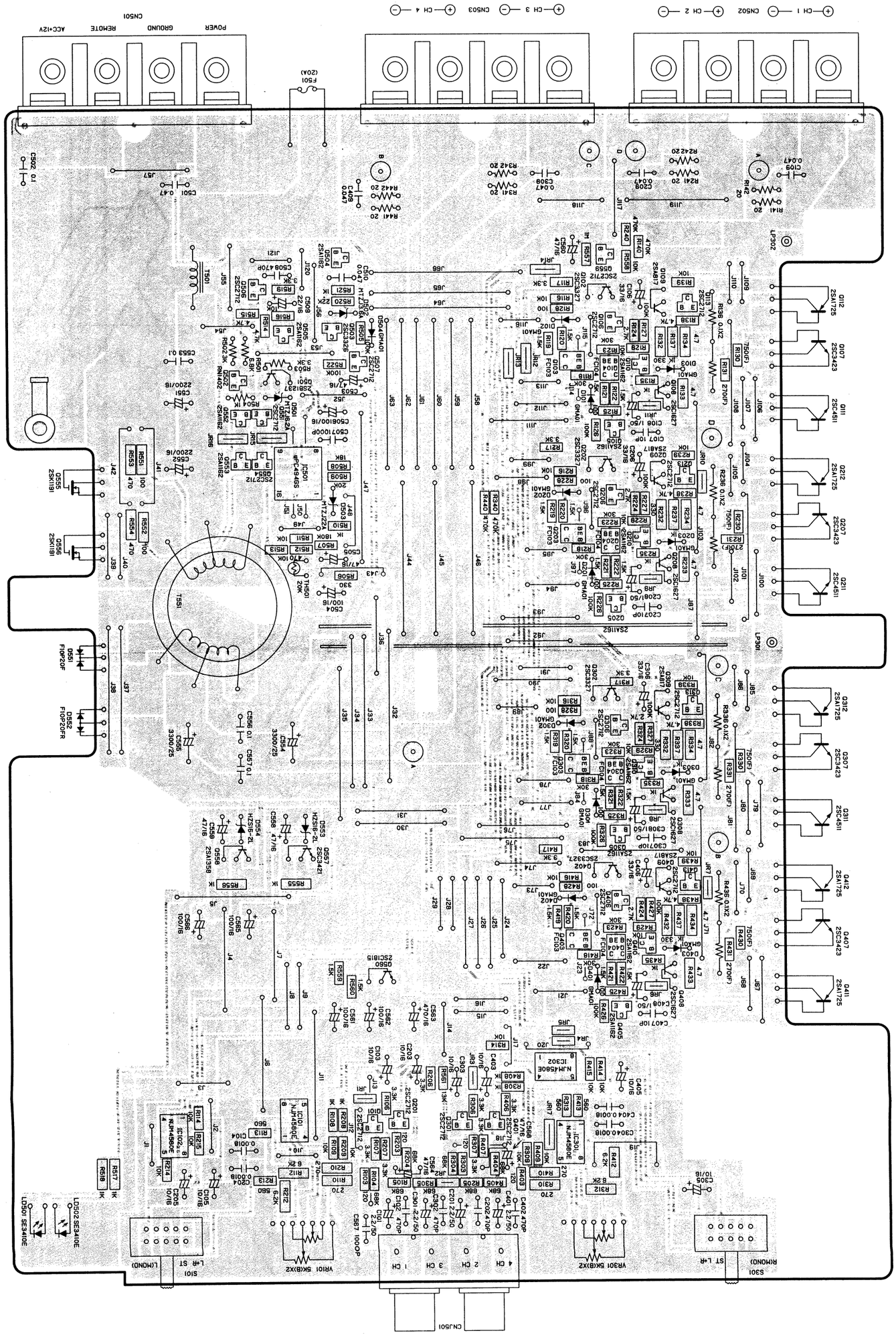
NO SIGNAL
TERMINAL VOLTAGE +B=14.4V

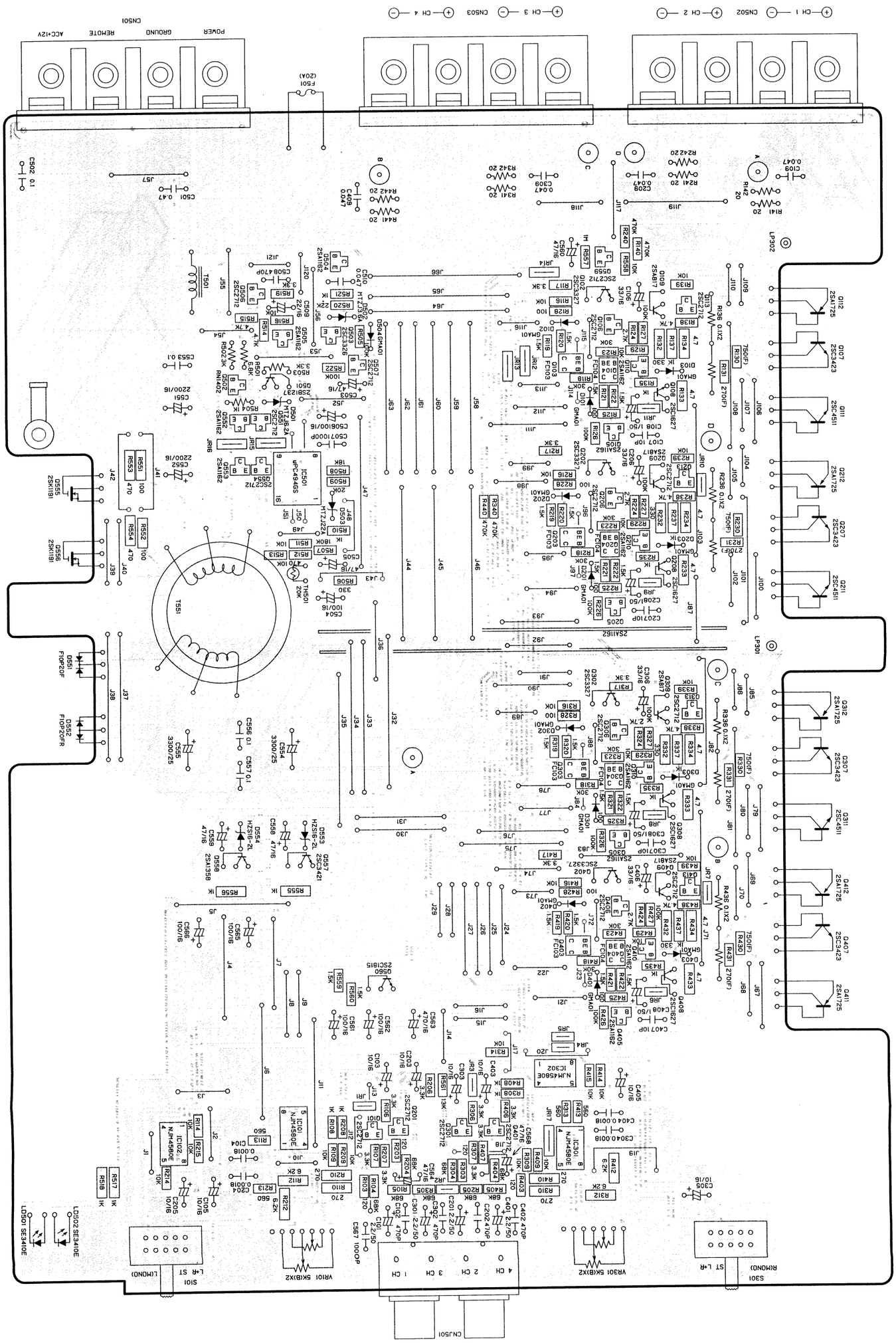
Ref.NO	Collector	Base	Emitter	
Q101, Q201 Q301, Q401	11.6	4.3	3.6	
Q508	16.1	16.8	15.4	
Q102, Q202 Q302, Q402	0	0.8(0)	0	(MUTE)
Q103, Q203 Q303, Q403	-20.4	0	0.6	
Q104, Q204 Q304, Q404	20.4	0	-0.6	
Q105, Q205 Q305, Q405	1.1	20.4	21.0	
Q106, Q206 Q306, Q406	-1.1	-20.4	-21.0	
Q107, Q207 Q307, Q407	1.1	0.6	-1.1	
Q108, Q208 Q308, Q408	21.5	1.1	0.6	
Q109, Q209 Q309, Q409	-21.5	-1.1	-0.6	
Q110, Q210 Q310, Q410	-1.1	0	0	
Q111, Q211 Q311, Q411	21.5	0.6	4mV	
Q112, Q212 Q312, Q412	-21.5	-0.6	-4mV	
Q113, Q213 Q313, Q413	14.4	4mV	-4mV	
Q551, Q554	14.4	5.5	5.8	
Q552, Q553	0	5.5	5.8	
Q557	21.5	16.8	16.1	
Q558	-21.5	-16.8	-16.1	
Q559	14.4	0	0	
Q501	14.4(0)	15.8(14.4)	14.4	(REM OFF)
Q502	8(8.5)	4.8(0)	0	(REM OFF)
Q503	1	0.7(0)	0(8.5)	(REM OFF)
Q504	21.5(0)	20.9(0)	21.5(0)	(MUTE)
Q505	8(14.4)	14.4(15.8)	14.4	(PROTECT)
Q506	14.4(0)	0(0.7)	0	(PROTECT)
Q507	3.5(0)	0(0.5)	0	(REM OFF)

Ref.NO	Source	Drain	Gate	
Q555, Q550	0	14.4	4.1(0)	(PROTECT)

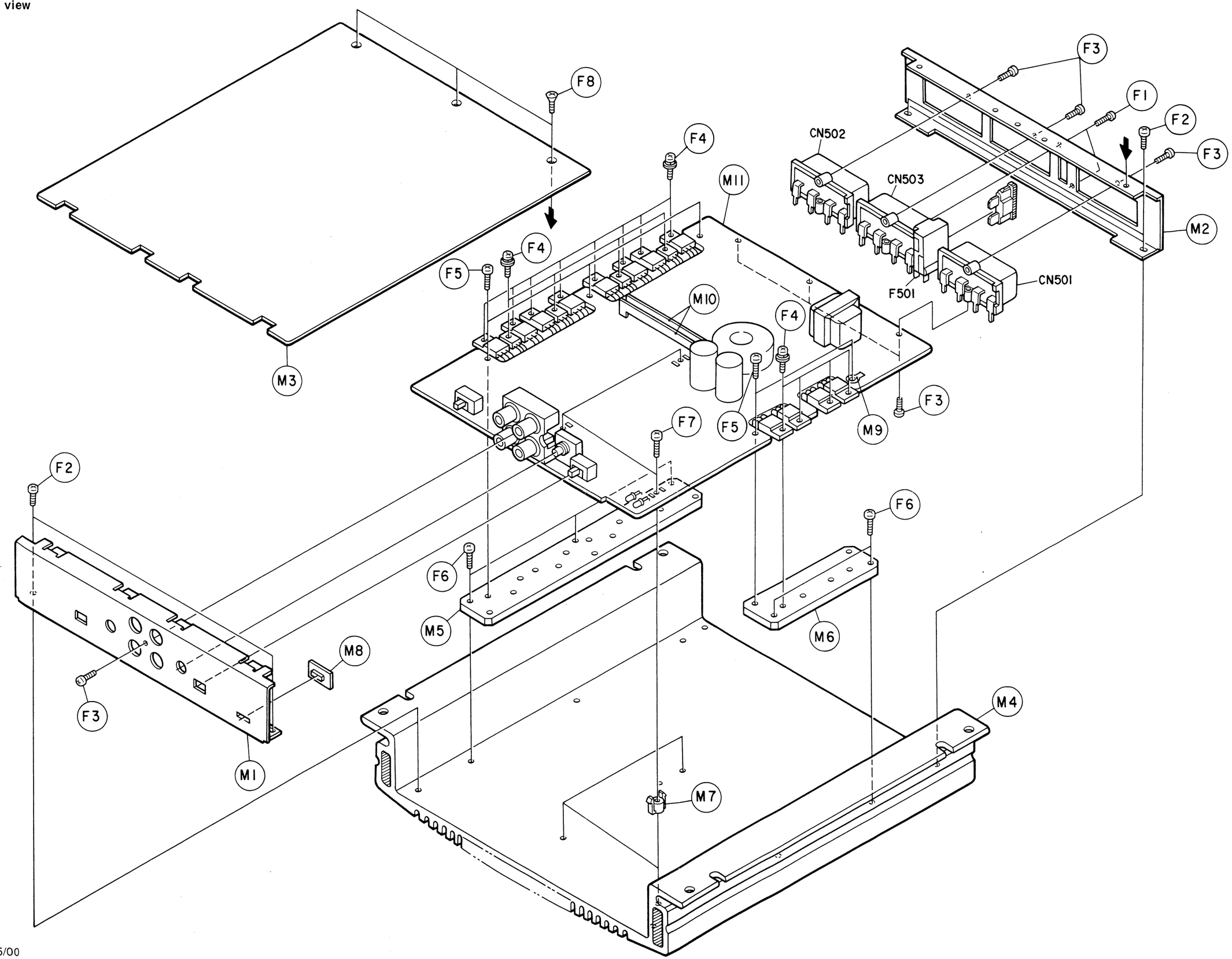
Ref.NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC101	0	0	0	-16.1	0	0	0	16.1	—	—	—	—	—	—	—	—
IC102	0	0	0	-16.1	0	0	0	16.1	—	—	—	—	—	—	—	—
IC301	0	0	0	-16.1	0	0	0	16.1	—	—	—	—	—	—	—	—
IC302	0	0	0	-16.1	0	0	0	16.1	—	—	—	—	—	—	—	—
IC501	0 (14.4)	2.5	0.2	0.5	2.0	4.0	0	14.4	5.5	5.5	14.4	14.4	5.0	5.0	2.5	0.2

(PROTECT)


CN501
POWER
GROUND
REMOTE
ACC+12V
F501 (20A)
CN502
CH 1
CH 2
CN503
CH 3
CH 4
CN504
4 CH
3 CH
2 CH
1 CH
S301
ST L+R
R(MONO)
S101
L+R ST
L(MONO)
VR301 5K(B)X2
VR101 5K(B)X2
LD501 SEG40E
LD502 SEG40E
D551 F10F20F
D552 F10F20R
LF302
LF301
T501
T551
IC301 NJM4580E
IC302 NJM4560E
IC101 NJM4580E
IC102 NJM4580E
CN505



Exploded view



22DAP525/00

PCS 74 016

Mechanical parts list

M1	4822 459 50856	M9	4822 466 83118
M2	4822 423 41258	M10	4822 466 83115
M4	4822 511 61024		
M7	4822 462 72032		
M8	4822 381 11522		

(See for CN501, CN502, CN503 and F501 the electrical parts list)

Electrical parts list

For resistors/capacitors/coils not mentioned here, refer to: Standard Component Catalogue 4822 736 53404.

D101	4822 130 33993	GMA01
D102	4822 130 33993	GMA01
D103	4822 130 33993	GMA01
D201	4822 130 33993	GMA01
D202	4822 130 33993	GMA01
D203	4822 130 33993	GMA01
D301	4822 130 33993	GMA01
D302	4822 130 33993	GMA01
D303	4822 130 33993	GMA01
D401	4822 130 33993	GMA01
D402	4822 130 33993	GMA01
D403	4822 130 33993	GMA01
D501	4822 130 83251	MTZJ6.2A
D502	4822 130 80316	MTZJ3.6A
D503	4822 130 83685	MTZJ 22A
D504	4822 130 33993	GMA01
D551	4822 130 80678	F10P20F
D552	4822 130 80679	F10P20FR
D553	4822 130 83686	HZS16-2L
D554	4822 130 83686	HZS16-2L
LD501	4822 130 83691	LED 3410E
LD502	4822 130 83691	LED 3410E

Q101	4822 130 61355	2SC2712Y
Q102	4822 130 63284	2SC3327A
Q103	4822 130 63581	FC103
Q104	4822 130 63582	FC104
Q105	4822 130 61311	2SA1162Y
Q106	4822 130 61355	2SC2712Y
Q107	4822 130 62711	2SC3423Y
Q108	4822 130 41507	2SC1627Y
Q109	4822 130 60693	2SA817
Q110	4822 130 61311	2SA1162Y
Q111	4822 130 63589	2SC4511Y
Q112	4822 130 63588	2SA1725Y
Q113	4822 130 61355	2SC2712Y
Q201	4822 130 61355	2SC2712Y
Q202	4822 130 63284	2SC3327A
Q203	4822 130 63581	FC103
Q204	4822 130 63582	FC104
Q205	4822 130 61311	2SA1162Y
Q206	4822 130 61355	2SC2712Y
Q207	4822 130 62711	2SC3423Y
Q208	4822 130 41507	2SC1627Y
Q209	4822 130 60693	2SA817
Q210	4822 130 61311	2SA1162Y
Q211	4822 130 63589	2SC4511Y
Q212	4822 130 63588	2SA1725Y
Q213	4822 130 61355	2SC2712Y
Q301	4822 130 61355	2SC2712Y
Q302	4822 130 63284	2SC3327A
Q303	4822 130 63581	FC103
Q304	4822 130 63582	FC104
Q305	4822 130 61311	2SA1162Y
Q306	4822 130 61355	2SC2712Y
Q307	4822 130 62711	2SC3423Y
Q308	4822 130 41507	2SC1627Y
Q309	4822 130 60693	2SA817
Q310	4822 130 61311	2SA1162Y
Q311	4822 130 63589	2SC4511Y
Q312	4822 130 63588	2SA1725Y
Q313	4822 130 61355	2SC2712Y
Q401	4822 130 61355	2SC2712Y
Q402	4822 130 63284	2SC3327A
Q403	4822 130 63581	FC103

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Q404	4822 130 63582	FC104
Q405	4822 130 61311	2SA1162Y
Q406	4822 130 61355	2SC2712Y
Q407	4822 130 62711	2SC3423Y
Q408	4822 130 41507	2SC1627Y
Q409	4822 130 60693	2SA817
Q410	4822 130 61311	2SA1162Y
Q411	4822 130 63589	2SC4511Y
Q412	4822 130 63588	2SA1725Y
Q413	4822 130 61355	2SC2712Y
Q501	4822 130 61439	2SB1237(R)
Q502	4822 130 63578	RN1402
Q503	5322 130 63229	2SC3326A
Q504	4822 130 61311	2SA1162Y
Q505	4822 130 61311	2SA1162Y
Q506	4822 130 61355	2SC2712Y
Q507	4822 130 61355	2SC2712Y
Q551	4822 130 61355	2SC2712Y
Q552	4822 130 61311	2SA1162Y
Q553	4822 130 61311	2SA1162Y
Q554	4822 130 61355	2SC2712Y
Q555	4822 130 63587	2SK1191
Q556	4822 130 63587	2SK1191
Q557	4822 130 60354	2SC3421Y
Q558	4822 130 62709	2SC1358Y
Q559	4822 130 61355	2SC2712Y
Q560	4822 130 41947	2SC1815Y

IC101	4822 209 33467	NJM4580E
IC102	4822 209 33467	NJM4580E
IC301	4822 209 33467	NJM4580E
IC302	4822 209 33467	NJM4580E
IC501	4822 209 33466	UPC494GS

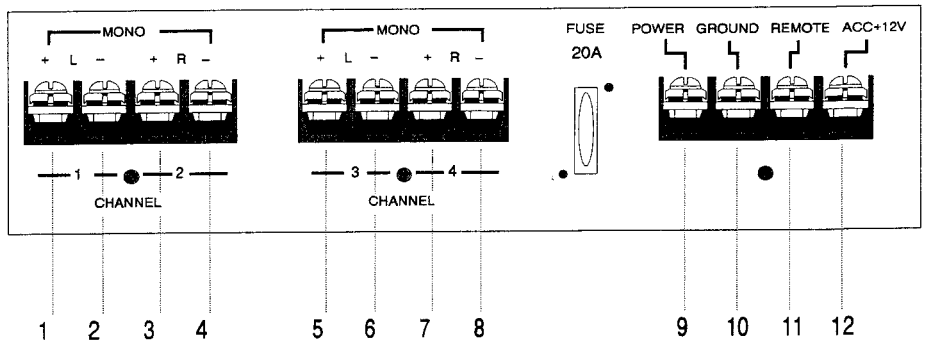
Miscellaneous

CN501	4822 290 81657	TERM.4-P
CN502	4822 290 81657	TERM.4-P
CN503	4822 290 81657	TERM.4-P
CNJ501	4822 290 81658	JACK,4-P
F501	4822 256 30515	FUSE HOLD.
	4822 071 22003	FUSE 20A
R136	4822 117 11191	0.1E*2 3W
R236	4822 117 11191	0.1E*2 3W
R336	4822 117 11191	0.1E*2 3W
R436	4822 117 11191	0.1E*2 3W

Miscellaneous

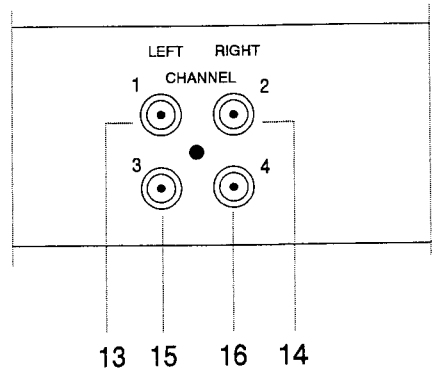
S101	4822 277 21738	SLIDE SW.
S301	4822 277 21738	SLIDE SW.
T501	4822 157 71182	CHOKE
T551	4822 146 21783	TRANSF.
TH501	4822 111 92181	THERM. 20K
VR101	4822 100 30192	5K*2 LOG
VR301	4822 100 30192	5K*2 LOG

PCS 74 018



Connections DAP525

part of other side



1 - 8:	Speaker terminals	
9 - 12:	Power terminals	
13 - 16:	Input RCA connectors	(White=Left, Red=Right)

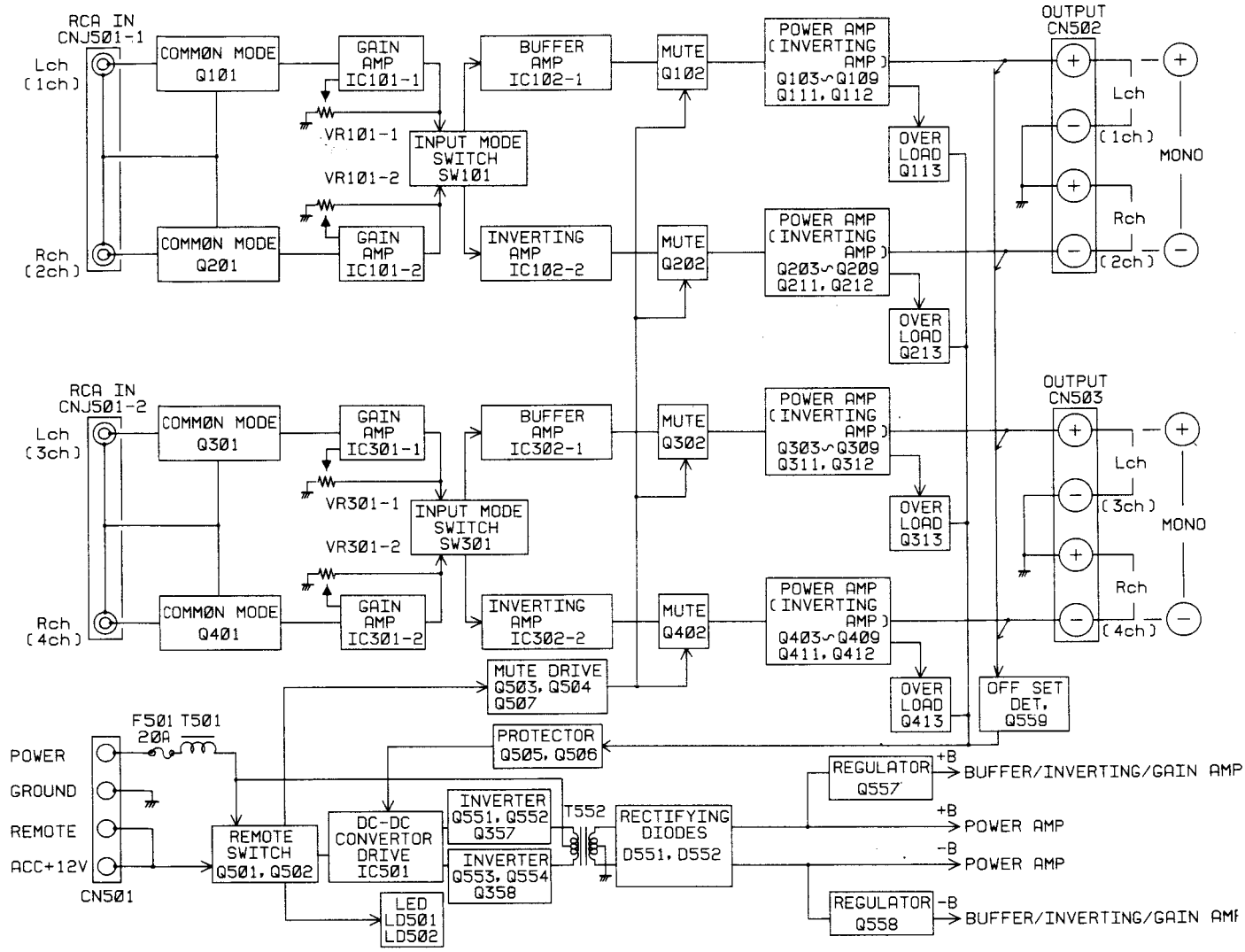
2-channel system connection:
(two 'bridged' channels)
- Line output (e.g. from radio set) 1 Left channel (white plug) to RCA connector 13
- Line output 1 Right channel (red plug) to RCA connector 16
- Line 2 outputs not connected
- Speaker channel 1-2 Left: '+' to terminal 1; '-' to terminal 4
- Speaker channel 3-4 Right: '+' to terminal 5; '-' to terminal 8

3-channel system connection:
(two 'single' channels; one 'bridged' channel)
- Line 1 output (e.g. from radio set) Left channel (white plug) to RCA connector 15
- Line 1 output Right channel (red plug) to RCA connector 16
- Line 2 output Left channel (white plug) to RCA connector 13
- Line 2 output Right channel (red plug) to RCA connector 14
- Speaker channel 1-2 Left+Right: '+' to terminal 1; '-' to terminal 4
- Speaker channel 3-4 Left: '+' to terminal 5; '-' to terminal 6
- Speaker channel 3-4 Right: '+' to terminal 7; '-' to terminal 8

4-channel system connection:
(four 'single' channels)
- Line 1 output (e.g. from radio set) Left channel (white plug) to RCA connector 15
- Line 1 output Right channel (red plug) to RCA connector 16
- Line 2 output Left channel (white plug) to RCA connector 13
- Line 2 output Right channel (red plug) to RCA connector 14
- Speaker channel 1-2 Left: '+' to terminal 1; '-' to terminal 2
- Speaker channel 1-2 Right: '+' to terminal 3; '-' to terminal 4
- Speaker channel 3-4 Left: '+' to terminal 5; '-' to terminal 6
- Speaker channel 3-4 Right: '+' to terminal 7; '-' to terminal 8

Power connections:
- +12V (permanent) to terminal 9
- Car ground to terminal 10
- 'Automatic aerial' or 'remote' output (e.g. from radio set) to terminal 11
- Terminal 12 (ACC+12V) is only used to control switch on/off other equipment (e.g. other amplifiers and/or equalizer)

Block diagram



Accessories

4822 736 22042	INSTRUCTION MANUAL
4822 321 62461	POWER CABLE ASSY
4822 321 62463	GROUND CABLE ASSY
4822 321 62464	REMOTE CABLE ASSY
4822 071 22003	FUSE 20A
4822 290 81655	TERMINAL RED
4822 290 81655	TERMINAL GREEN
4822 321 62456	RCA ADAPTOR 4-POLE